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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,734	02/09/2004	Wataru Ishikawa	KOY-17	9212
20311 7590 08/15/2007 LUCAS & MERCANTI, LLP 475 PARK AVENUE SOUTH 15TH FLOOR NEW YORK, NY 10016			EXAMINER MARTIN, LAURA E	
			ART UNIT 2853	PAPER NUMBER
			MAIL DATE 08/15/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/774,734

Applicant(s)

ISHIKAWA, WATARU

Examiner

Laura E. Martin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5 and 7-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5 and 7-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, and 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chatterjee et al. (US 5985984) in view of Noguchi et al. (US 20020065335).

Chatterjee et al. discloses the following claim limitations:

As per claims 1 and 4: a light curable aqueous resin composition (column 1, lines 12-21 and column 2, lines 20-25) comprising a polymerizable compound, and an aqueous photopolymerization initiator which generates free radicals by active ray (column 7, lines 4-35) and a non-ionic surfactant (column 7, line 65-column 8, lines 23).

As per claims 11 and 12: the amount of an organic solvent being 0 to 5% (column 7, lines 48-55 – Chatterjee et al. disclose that there may or may not be organic solvents within the ink; in example four, there amounts of an organic solvent smaller than 5%).

As per claims 13 and 14: the amount of an organic solvent being 0 to 3% (column 7, lines 48-55 – Chatterjee et al. disclose that there may or may not be organic solvents within the ink; in example four, there amounts of an organic solvent smaller than 3%).

Chaterjee et al. does not disclose the following claim limitations:

As per claims 1 and 4: a polymerizable compound which polymerizes with radical polymerization by water and active ray.

As per claims 7 and 9: jetting onto an unabsorbant recording material.

As per claims 8 and 10: jetting onto an absorbent recording material.

Noguchi et al. discloses the following claim limitations:

As per claims 1 and 4: a polymerizable compound which polymerizes with radical polymerization by water and active ray [0002] and [0027].

As per claims 7 and 9: jetting onto an unabsorbant recording material [0012].

As per claims 8 and 10: jetting onto an absorbent recording material [0054].

As per claims 11 and 12: the amount of an organic solvent being 0 to 5% [0123].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink taught by Chaterjee et al. with the disclosure of Noguchi et al. in order to print with an ink jet printer high quality color images.

Claims 2, 3, 5, 6, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chatterjee et al. (US 5985984) and Noguchi et al. (US 20020065335) and further in view of Owatari et al. (US 6095645).

Chatterjee et al. and Noguchi et al. do not disclose the following claim limitations:

As per claims 2 and 5: a non-ionic surfactant is fluorine system surfactant comprising a perfluoroalkyl group in a molecule.

As per claims 3 and 6: the content of the non-ionic surfactant is 10 to 10000 ppm.

Owatari et al. discloses the following claim limitations:

As per claims 2 and 5: a non-ionic surfactant is fluorine system surfactant comprising a perfluoroalkyl group in a molecule (column 3, lines 64).

As per claims 3 and 6: the content of the non-ionic surfactant is 10 to 10000 ppm (column 4, line 7).

As per claims 15 and 16: the content of the non-ionic surfactant is 20 to 1000 ppm (column 4, line 7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink taught by Chaterjee et al. as modified with the disclosure of Owatari et al. in order to provide a stable ink composition.

Response to Arguments

In response to applicant's arguments, the recitations "active ray curable type aqueous ink, which is jetted from an ink jet printer onto a recording material by a recording head comprising nozzles which selectively control ejection of ink droplets, wherein:" and "an image forming method in which active ray curable type aqueous ink is cured by active ray is jetted from an ink jet printer onto a recording material by a recording head comprising nozzles which selectively control ejection of ink droplets, wherein:" have not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the

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process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

The body of the claim does not bring the ink jet printer, solely the ink, into the body of the claim, thus the ink jet printer claimed in the preamble has not been given weight. The examiner considers the preamble to ends at "comprising:" and suggests, that in order for the first claim to overcome the present rejection, it be written as:

"Active ray curable type aqueous ink comprising: a light curable type aqueous resin composition comprising a polymerizable compound which polymerizes with radical polymerization by water and active ray, an aqueous photo polymerization initiator which generates free radicals by active ray, and a non-ionic surfactant, wherein content of the non-ionic surfactant is i0 to i0,000 ppm, which is jetted onto a recording material by a recording head of an ink jet printer comprising nozzles which selectively controls control ejection of ink droplets, and is subsequently cured by irradiation of active ray."

As per the method claim (4), there are currently no method steps within the body of the claim.

As per the declaration dated June 20, 2007, the argument that the ink of Chatterjee is too viscous to be jetted onto a print media is still unconvincing, as the preamble is the only part of the claim in which the ink jet printer is mentioned. If the ink jet printer were claimed in the body of the claim, the present rejection would be overcome.

The applicant argues that it would have not been obvious to combine the teachings of Chattergee and Noguchi because the ink taught in Chattergee does not contain a substantial amount of water; however, the examiner disagrees. Chattergee discloses an amount of water within the ink, therefore, it would have been obvious to one having ordinary skill in the art to modify this ink that includes water with another ink including water (such as that taught by Noguchi).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Martin whose telephone number is (571) 272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Laura E. Martin

 8/13/07
MANISH S. SHAH
PRIMARY EXAMINER